



The 'Tsunami safe(r) house' with its Sri Lankan builders and Harvard student architects (from left): Ellen Chen, Ying Zhou, Nour Jallad, Eric Ho, and Richard Lam. *Page 2*

Center Launches the Environmental Fellows at Harvard

The Center is accepting applications for the first eight postdoctoral fellowships to be awarded under its new Environmental Fellows at Harvard Program. The two-year fellowships will be among the most generous at Harvard and should attract some of the best minds of the generation to work on complex environmental problems.

Each fellow will work with a host faculty member in the host's school or department. The program is open to recent post-docs in any field who want to work on problems related to the environment. The fellows, their hosts, and guest speakers will convene at the Center regularly to discuss their work.

The Center has designed the program to foster new environmental research throughout the University while expanding faculty members' access to highly qualified researchers. Before applying, a would-be fellow must secure a commitment from a faculty member to serve as his or her host. The selection process will ensure that a diverse group of fellows works on a variety of topics.

The fellowship will provide \$50,000 per year, plus benefits, and a \$5,000 allowance for travel. The Center plans to award six new fellowships each year.

Applications are due by January 15. The fellows will start work in September 2006. Application forms and details are posted at environment.harvard.edu.

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The Future of Energy

Finding a secure, safe, and reliable source of energy to power world economic growth will be one of the grand challenges of this century. Harvard, with its expertise in science, technology, public health, public policy, business, design, and law, will play a leading role in defining that challenge and training a new generation of energy scholars. After decades of relatively cheap oil, recent shocks have suggested the need for innovation, yet the research landscape is still largely undefined.

The Center for the Environment hopes to illuminate that landscape through a multi-year initiative on the future of energy. The Center will bring experts from academia, the business world, government, and NGOs to Cambridge for sessions with faculty members and students. Several key presentations will be open to the public as well. The symposia will explore energy supplies and technology; transportation; economics, public policy, and corporate strategy; climate change, and other environmental concerns.

Among the speakers will be Matthew R. Simmons, author of *Twilight in the Desert: The Coming Saudi Oil Shock and the World Economy*, and president of Simmons & Company International, a Houston-based investment bank that specializes in the energy industry. Iain Conn, executive director of the BP Group, is expected early next year. Conn is responsible for BP's programs on technology, environment, safety, and health, and the company's operations in Europe, the UK, Russia, the Middle East, the Caspian, and Africa.

John Podesta, president of the Center for American Progress and former chief of staff to President William J. Clinton, will speak about energy policy early next semester. The Center will post on its web-based calendar information about all public sessions as they are scheduled.

Museum Opens Exhibit on Climate Change

Glaciers on five continents melt away on a video screen in a compelling series of photos taken over 65 years. A facsimile of an ice core and a real fossilized crocodile skull document changes in global temperatures over thousands and millions of years. Nearby, visitors vote on policy options and a computer-driven film projects some of the possible global impacts of their choices.

This is the new exhibit, “Climate Change: Our Global Experiment,” at the Harvard Museum of Natural History on Oxford Street. Filling a gallery at the intersection of the Geological Museum and the Peabody Museum of Archaeology and Ethnology—the intersection of the physical world and human culture—the exhibit is a joint production of the museum staff and the Center for the Environment. The Center helped pay for the exhibit and geochemist Daniel P. Schrag, the Center’s director, helped design its content.

“Climate Change” highlights the work of several Harvard scientists, including James McCarthy’s research on the changing Arctic ecosystem, Paul Hoffman’s work with Schrag on the “snowball Earth” scenario, and Steve Wofsy’s work on the carbon cycle. The exhibit’s display panels will change over time to present the latest research.

“The exhibit is literally outside the Center’s door,” Schrag said. “Most of the Center’s visitors will pass through the gallery and will, I hope, better appreciate the role the University can play in addressing complex environmental problems.”

Schrag presented a lecture on climate change on September 29 to mark the opening of the exhibit.

The Center gratefully acknowledges that a share of its financial contribution to the exhibit was made possible by a donation from the Ford Motor Company.

After the Tsunami: Center Helps School of Design Students with Housing Project

The hard part was over before the Center got involved. Five students at the Harvard Graduate School of Design

had already won a competition held at MIT to design housing and community rebuilding plans for parts of Sri Lanka that had been flattened by the tsunami in December 2004. The team developed a “low-tech-construction/high-tech-design” for permanent housing that would be five times more resistant to an incoming tsunami than existing structures. The Prajnopaya Foundation, a Buddhist organization dedicated to service and education, had committed funds to build 1,000 houses using the students’ design. The work was under way in Sri Lanka.

But the graduate students—Ellen Chen, Eric Ho, Nour Jallad, Rick Lam, and Ying Zhou—had no way to participate in the construction, no way to see how their designs really worked, until their mentor, Associate Professor of Architecture Michelle Addington at the School of Design, turned to the Center for help. The Center responded with airfare and travel expenses for the five students, who returned from two weeks in Sri Lanka just before classes resumed.

The students arrived at the building site to find their house mostly built, but there was a problem: the potential occupants appreciated the ventilation the design’s lattice walls provided but they also wanted more privacy. That night, the students held a hastily convened charrette with villagers and builders to redesign the walls.

“Everything happened so fast,” Jallad explained back in Cambridge. “It was crucial that we were there.” The students talked to government officials, relief workers, and the displaced residents of the coastal villages. They learned that the residents like to repair their fishing nets outside so they decided to make the porch deeper the next time around. (Addington noted that the modification would help keep the building cooler, too.)

Eight days after the charrette, the house was done, built at a cost of about \$3,500—about \$1,500 less than the typical concrete “hot box” units being built by the major relief organizations. Addington hopes that the NGO community will adopt the students’ design in the region because it will be cooler as well as safer. The students have also created a stunning visual display comparing post-tsunami housing being built in Sri Lanka. The display may be viewed at the Center for the Environment during business hours.

The students had been “amazingly successful,” Addington said, because they were tenacious, entrepreneurial, quick to identify key strategic moves, and yet “willing to give up a little bit of control” as part of the collaboration with the engineers, builders, and the sponsoring foundation.

For its part, the Center for the Environment is proud to have enabled that on-the-ground collaboration. The Center supports graduate and undergraduate students in several

other ways. Over the last four years, the Center has provided more than \$82,000 to help 43 undergraduates pay for environmental field research, typically in the summer before their senior year. (A complete list of undergraduate recipients and their research topics is at www.environment.harvard.edu.) Because the Center is an interdisciplinary organization supporting environmental research and learning throughout the University, it is an effective conduit for donors wishing to enhance students' education.

Cornelia Dean Teaches Two Classes on Science Writing

Science writers are essential intermediaries between the academic world and the general public and few have helped bridge those worlds more effectively than Cornelia Dean, senior writer and former science editor at the *New York Times*. Dean taught a course to Environmental Science and Public Policy concentrators at Harvard in the 2004 spring term. With funding from the Harvard University Center for the Environment, she has returned to teach courses in the fall and spring terms this year.

During Dean's tenure as an editor in the *Times*' Science Department, its writers won three Pulitzer Prizes and several other prestigious journalism honors.

As a visiting lecturer appointed by the Division of Engineering and Applied Sciences, Dean is teaching a course for graduate students titled "Communicating Science." "The course," Dean explains in a written introduction, "will discuss the way issues are presented to the public in the news media, and how the relative silence of scientists weakens our national discourse. Its goal is to teach participants, graduate students from the natural sciences, about the landscape of science journalism and how (and why) they should help journalists tell science stories accurately and in engaging fashion." The course drew so many interested students that Dean had to turn several away.

Next spring, undergraduates will be able to sign up for "Science Fictions: The Use and Misuse of Scientific Information in American Public Life."

Both courses are described in more detail in the new *Guide to Environmental Courses* published by the Center and distributed in hard copy to Harvard students at registration. The guide lists several hundred courses taught at the University (and at MIT and Tufts) and is intended to help students consider environmental classes that are taught by departments other than their own.

The course guide is available online at www.environment.harvard.edu.

Fire, Floods, and the Where We Live: a Mini-Course with Roger Kennedy

Starting on October 18, undergraduates will have the opportunity to work with Roger Kennedy on a topic that could hardly be more timely: "Floods, Fire, Acts of God, and Acts of Humankind: The Economics and Politics of Subsidized Settlement into Dangerous Places."

Kennedy was director of the National Park Service under President Clinton and is director emeritus of the National Museum of American History in Washington, DC. He has written extensively on American history and architecture. His forthcoming book, *Wildfire and Americans: How to Save Lives, Property, and Your Tax Dollars*, will be one of the key texts for the new course. The not-for-credit six-week class will meet in the Center's seminar room.

At the Center

The Center has hired two new staff members. *Rick Minard* started as executive director on June 1. He had been co-executive director of the NH Center for Public Policy Studies since 2000 and held leadership positions at the National Academy of Public Administration's Center for the Economy and the Environment, and the Northeast Center for Comparative Risk at Vermont Law School. He is a graduate of Harvard College and the Kennedy School of Government.

Jennifer MacGregor is coordinating the Center's events and publications. MacGregor earned her masters in international relations and environmental policy from Boston University and has worked in the Department of Earth and Planetary Sciences as a faculty assistant.

This newsletter is another innovation from the Center and is intended to keep the Harvard Community and friends of the Center informed about the Center's activities.

To be certain to receive the Center's newsletter and emailed notices of coming events, please contact us at huce@environment.harvard.edu.

The Harvard University Center for the Environment is an interfaculty initiative affiliated with the Faculty of Arts and Sciences and serving the entire University.

The Center encourages research and education about the environment and its many interactions with human society.

Events Calendar/On the Web

The Center's web site includes a calendar of events of interest to environmental students, faculty, and the general public. Many of the events are sponsored by the Center.

Among the highlights of the next few months are:

- **October 24:** *David Goldston*, staff director, House Science Committee, will meet with students and faculty at the Kennedy School over a brown-bag lunch, and at 6 p.m. will talk at the Center about environmental policy and politics with undergraduates and graduate students in an informal session that several graduate-school student organizations helped promote.

- **November 22:** *Warren Evans*, director of the World Bank's environment department, will meet with faculty at the Center.

- **Nov 30:** *Dale Bosworth*, chief of the US Forest Service, will give a speech marking the 100th anniversary of the Forest Service and the 110th anniversary of Gifford Pinchot's famous speech outlining his vision for multiple use of the nation's forests.

- **Dec 1:** *Bruce Babbitt*, former secretary of the Interior, will give a public lecture drawn from his new book, *Cities in the Wilderness*, which describes major conservation projects undertaken by the Clinton administration, including the Everglades restoration, reintroduction of the wolf into Yellowstone National Park, and the creation of the Grand Staircase-Escalante National Monument in Utah.

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